LESSON MAKER PRO

Numbers in Action

Use rational numbers to solve expressions and real-world problems.

GRADE 7 · 7.N.2.5

7.N.2.5 "Model and solve problems using rational numbers involving addition, subtraction, multiplication, division, and positive integer exponents."

NAME _____ DATE _____

CHOOSE THE ORDER

Evaluate parentheses and powers first. Then multiply or divide from left to right, and add or subtract from left to right. To divide by a nonzero fraction, multiply by its reciprocal.

WORKED EXAMPLE

Evaluate $(-11/12 + 5/6) \times 4^2$.

1. Evaluate the parentheses: -11/12 + 5/6 = -11/12 + 10/12 = -1/12.
2. Evaluate the power: $4^2 = 16$.
3. Multiply: (-1/12) × 16 = -4/3.

Answer: -4/3

PRACTICE 6 problems

1 Evaluate -3/8 + 7/8.

ANSWER _____

2 Evaluate 9/10 - (-3/10).

ANSWER _____

3 Evaluate (-7/9) × 3/14.

ANSWER _____

4 Evaluate (-15/8) ÷ (3/8).

ANSWER _____

5 Evaluate $(-3/7)^3$.

ANSWER _____

6 Evaluate 3/8 + (-7/8) × 9/14.

ANSWER _____

APPLY IT Show your work

1 Your game account has $18.75. You buy 3 items for $2.75 each, then receive a $7.25 credit. What is your new balance?

WORK SPACE

ANSWER _____

2 You make 7 square stickers for your gaming group. Each sticker has a side length of 3/8 inch. What is the total area of the stickers?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Evaluate $(-3/8) \div (9/16) + (3/7)^2$. Show how you handle the division and the power.

WORK SPACE AND ANSWER

ANSWER KEY

Numbers in Action

GRADE 7 · 7.N.2.5

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Evaluate -3/8 + 7/8.	**1/2**
2	Evaluate 9/10 - (-3/10).	**6/5**
3	Evaluate (-7/9) × 3/14.	**-1/6**
4	Evaluate (-15/8) ÷ (3/8).	**-5**
5	Evaluate $(-3/7)^3$.	**-27/343**
6	Evaluate 3/8 + (-7/8) × 9/14.	**-3/16**

PART 2 · APPLY IT

1. **$17.75** The items cost 3 × $2.75 = $8.25. Calculate $18.75 - $8.25 + $7.25 = $17.75.
2. **63/64 square inch** Each sticker has an area of $(3/8)^2$ = 9/64 square inch. Multiply by 7 to get 63/64 square inch.

CHALLENGE

Dividing by 9/16 gives (-3/8) × (16/9) = -2/3. The power is 9/49, so -2/3 + 9/49 = -71/147.

Accept equivalent fractions or mixed numbers for the numerical answers. In the challenge, look for division by the reciprocal and squaring both the numerator and denominator.